

2012-2013 Weekly Field Reports

Copacabana, King George Island

Volume 4
November 5, 2012

Science Report:

1. Penguins: The peak of egg-laying for the Adélie penguins has been difficult to determine this year due to the continuing accumulation of snow and cold temperatures, often resulting in one or both eggs becoming buried, nests getting partially or completely covered-over by snow, or delayed egg-laying. The two former conditions also have led to early abandonment, in some instances. Some of the completely covered nests have just an “air hole” at the surface, with the occupant’s bill just visible, the only indication that the nest is still occupied and the bird still alive. These and many of the other nests in deep snow-holes have eggs sitting in melt-water (from the heat of the incubating bird) and most of these eggs will not hatch even if the penguins incubate them faithfully for 5+ weeks. Reproductive success for the Adélie penguins looks like it will be poor this year, given all these early losses and problems with the snow. Currently, only 54 of the 95 reproductive study nests that had eggs are still active and many of these nests are sitting in deep snow-holes.

Gentoo penguins are moving daily to even higher ground and both our new and re-occupied old colonies are filling fast. More new colonies continue to be established as bare ground becomes exposed on the high ridge tops above even the new colonies that were established in 2009-10, another heavy snow year. Also, giant petrels continue to be displaced by gentoo penguins searching for snow-free ground and pebbles, which are in abundance in their colonies. Eggs are now being laid in the high colonies, both old and new, including the giant petrel areas, and we are just starting to see some random eggs in the beach colonies, although most of these colonies are still under snow.

The few chinstrap penguins we have in the colony are starting to build nests, display, and pair up, with three pairs already in attendance on nests among the Adélies and gentoos on the beach. The main chinstrap penguin colonies in the Admiralty Bay area, Uchatka and Patelnia, are south of Copa, and we visit them regularly for work with the penguins and skuas there. We hiked to Uchatka on Thursday (11/8) to retrieve GLS (geolocator) tags that were deployed on breeding chinstrap penguins last February (similar to the GLS tags deployed on Adélie penguins). Twenty-nine of the 50 tags deployed were recovered and will be brought back to California for data download. We will return to Uchatka this week, weather permitting, to search for more tags.



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2. Skuas: Regular checks of Copa skua breeding territories continue and most of the prior season's birds are in attendance. Territories where an old mate has yet to return have several new birds displaying with the resident territory holder. Occasionally, a new skua will challenge the resident territory holder in an attempt to take over that territory, often resulting in vicious fights, sometimes to the death. We have observed several fights this year so far, but no changes in territory ownership to date. The first skua egg is usually found during the 3rd week of November, but due to the above normal snow conditions and very little exposed ground for nesting, eggs will probably be delayed this year. Currently, the skuas are simply occupying their territories and going through their courtship behaviors.

In addition to monitoring the pairs for reproductive success, we also collect their feces throughout the breeding period, to determine what they are eating. These samples will be sent back to California to be analyzed, specifically to look for any fish otoliths (ear bones), which can be used to determine not only the species of fish eaten, but also the size.

3. Whales and Seals: The first humpback whale was seen on Monday (11/3), diving and apparently feeding in the middle of the bay.

Several leopard seals were seen during the week, mostly resting on ice floes, but two individuals were observed patrolling for penguins just offshore. The weekly seal census only yielded four young elephant seals near Arctowski.

Camp Activities:

The remaining gutters were installed on Sunday (11/4), in preparation for warming temperatures and the resulting melt-water that's collected via a gutter and barrel system for our water supply. Snow, while still available, is shoveled onto the roofs to melt. Once the snow is gone, we depend on precipitation to keep the barrels full.

Weekly Weather:

Average temperatures remained below freezing for most of the week. Tuesday (11/6) and Thursday (11/8), however, were sunny and warmer, with temperatures near freezing on Tuesday and above freezing and calm on Thursday. Friday (11/9), a storm blew in from the east-southeast, bringing strong winds, heavy surf, cold temperatures, and some snow – the maximum wind speed registered 60 knots.



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